

# IJKP-1 / Installation Instructions

## 4-Tire Air System for Jeep JK Unlimited (2007 - 2018) / Jeep JK (2007 - 2010) with ARB Twin Compressor (CKMTA12)

Made in USA

### Kit Contents:

- 1 Bracket for ARB Compressor
- 2 Brackets with Quick Connect Bulkheads
- 8 M6x16mm Button Head Bolts / Nuts
- 1 Branch Tee Fitting
- 1 12-inch section of Black Air Line Tubing (Compressor to Passenger Seat)
- 1 48-inch section of Black Air Line Tubing (Compressor to Driver Seat)
- 2 Double air lines (10ft) with 2 Y-Connectors, 4 Haltec Air Chucks, and Custom Storage Bag
- 1 Black Plug (for closing one side)
- 2 5/16" Ring Terminals for Main ARB Harness to Battery
- 2 22-18 Gauge (Red) Quick Splices (1 Scotchlok / 1 T-Tap Set)
- 1 Air Down / Up Tool (IJKP-18)

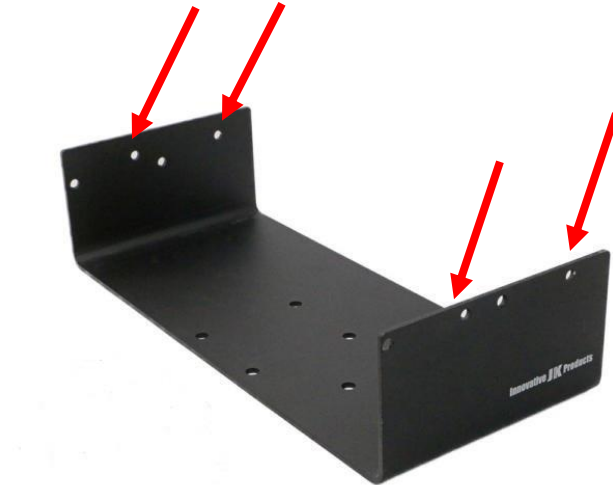
### Tools Required:

- Small Flat Blade Screwdriver or Metal Paper Clip
- Metal Rod and Electrical Tape (to help fish ARB wire harness through firewall)
- Drill
- 1/4" Drill Bit
- 12" Extension with 3/4" Step Drill (greatly eases ARB harness installation)
- Ratchet
- Extension
- 18mm Socket
- Breaker Bar
- Impact (optional)
- Torque Wrench
- 10mm Socket
- 10mm Wrench
- 4mm Allen Wrench
- T-30 Torx
- Crimping Tool
- Pliers

### Other items required (not Supplied):

- Mounting location for the supplied ARB Compressor Switch. Options:
  - Daystar makes a Lower Dash Switch Panel or A-Pillar Mounted Pod
  - Cut an opening in dash or console for switch
  - Direct wire to an sPOD or equivalent switch control (instructions included in **Step 5**)
- 22-18 Gauge Wire (Red and Blue) may be required to extend leads on ARB harness for Power and Switch Light.

NOTE: The **4 Red** arrows indicate the holes you will be using to mount the bracket.  
**DO NOT** use hole pairs that are off centered, closer to edge (those are for RHD or driver seat install (see last page of instructions))



## STEP 1 – Compressor Preparation

- 1-A) Insert an open end 10mm wrench into the slot on the top of the compressor and loosen the bolt on the end of the manifold (just enough to allow the end cap to rotate). Install the provided branch tee fitting into the outlet. Tighten the fitting to ensure a good seal. Rotate the fitting as far over as possible (**Figure 1**), then retighten the bolt on the manifold. **This step is important since seat clearance is very tight. Get the fitting over as far as possible!** Install the ARB provided filters on back of compressor and set assembly aside.

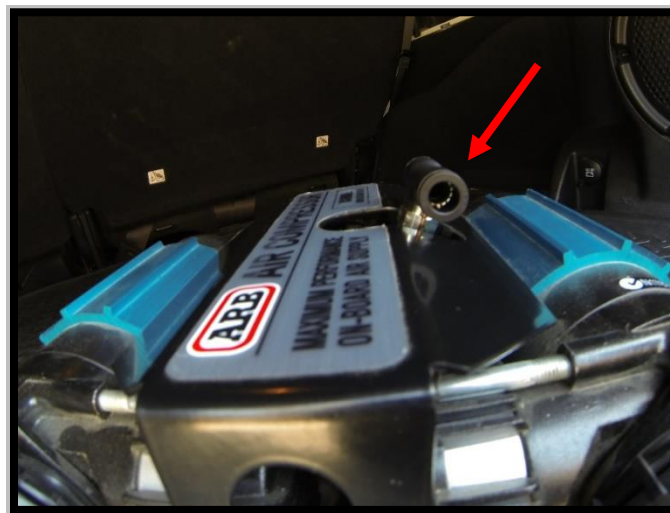


Figure 1

- 1-B) Install the ARB provided filters on the back of the compressor.

## **DISCONNECT THE BATTERY BEFORE PROCEEDING**

### **STEP 2 – Passenger Seat Removal, Preparation, and Brackets Installation**

- 2-A) If equipped, disconnect the yellow connector(s) under the passenger seat. There may be one to two on newer model Jeeps and none on older models.
- 2-B) Using an 18mm socket remove the 4 bolts that secure the seat in the Jeep. You may need a breaker bar (or impact) to get these loose.
- 2-C) With the rear seat in the upright position (not folded), lay the front seat back as shown in **Figure 2**. **MAKE SURE YOU DO NOT ALLOW EITHER SEAT FRAME RAIL TO MOVE.** They can move independently once unbolted from floor and this will mess up the alignment and installation of the bracket later on. Wrap the rear seat belt across the top of the seat to hold it in place.



**Figure 2**

2-D) If equipped, remove the yellow plug(s) from the metal plate and remove the metal plate on the bottom of the seat (this may require rivets to be drilled out or screws to be removed, check first). Remove and discard, the plate is no longer needed.



**Figure 3**

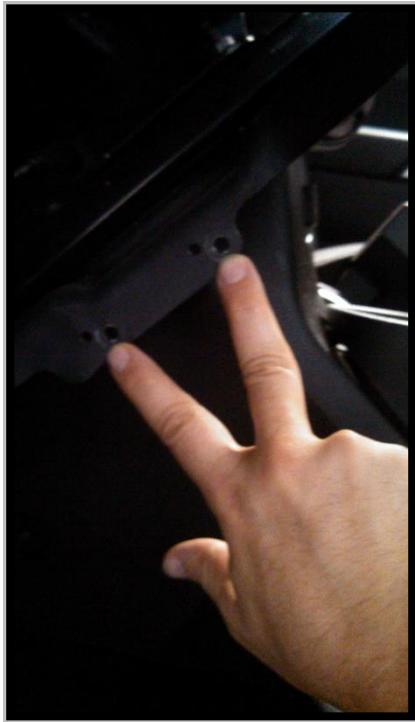
2-E) For 2013+ Jeeps, simply use a ¼" drill to drill out the two existing holes on the outer side seat frame rail as shown in **Figure 4**. Drill out the same two holes on the driver's seat. Skip to **Step 2-G**.



**Figure 4**

2-F) For 2007 – 2012 Jeeps, you will first need to mark the outer side seat frame rail holes for drilling (Jeep was not kind enough to provide these on older models). Continue to Step **2-G** for details.

2-G) The provided bracket will be bolted to the inner side seat frame rail (towards center of vehicle) using the two holes shown in **Figure 5** (the lower, larger holes). Make sure the bracket is oriented as shown in **Figure 6** with the red arrows indicating the mounting holes.

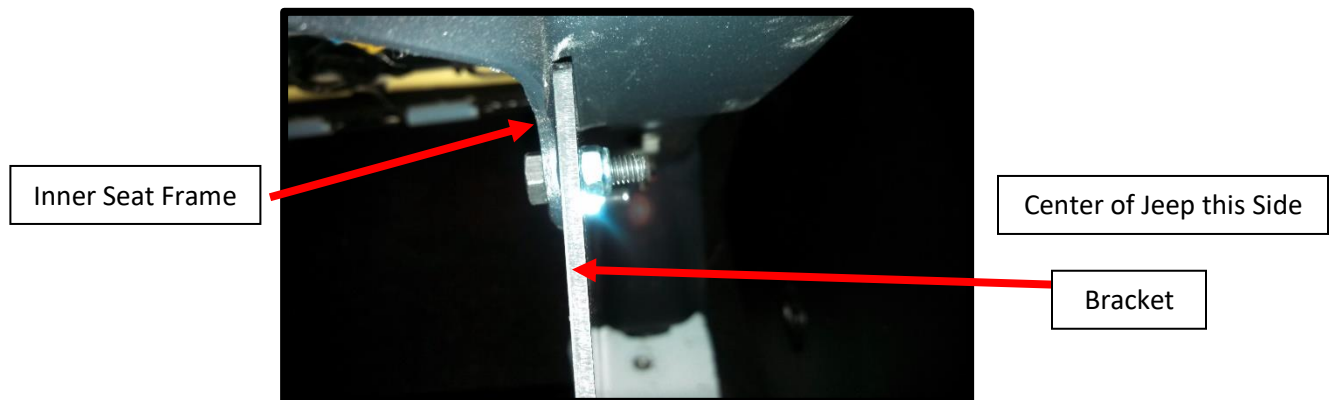


**Figure 5**



**Figure 6**

2-H) Bolt the bracket to the **inside** (towards center of vehicle) of the inner side seat frame rail as shown in **Figure 7**. It is important that the bolt and nut face in the direction shown (nut will be towards center of vehicle).



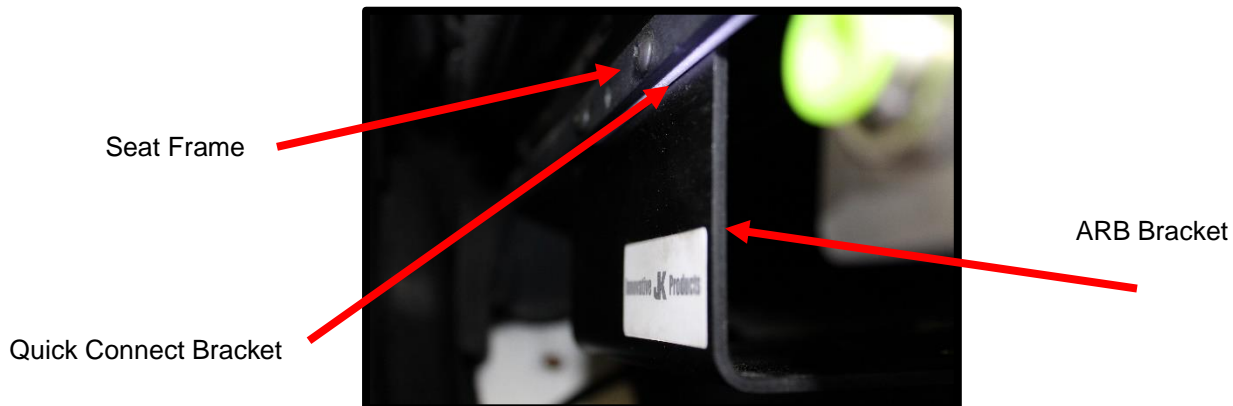
**Figure 7**

- 2-I) Skip to **Step 2-J** for 2013+ Jeeps. Using the holes in the bracket, mark the holes on the outer side seat frame rail. Make sure the bracket is pushed up before marking holes. Before drilling, I would HIGHLY RECOMMEND you lay the seat back down onto the floor mounting holes to make sure none of the frame rails have moved as noted in **Step 2-C**. If the rails have moved and you drill the holes everything will be out of alignment! Once you are sure everything is aligned, mark the holes and drill the two 1/4" holes in the outer side seat frame rail.
- 2-J) Use the two holes you have just drilled as guide and align the quick connect bracket with the two holes and then mark the hole where it will mount to the leg of the seat as shown in **Figure 8**. Drill a 1/4" hole at your mark.



**Figure 8**

- 2-K) Bolt the bracket and quick connect bracket to the **inside** (towards center of vehicle) of the outer side seat frame rail as shown in **Figure 9**. The order is (starting from outside of vehicle), seat frame, quick connect bracket, then ARB bracket. The quick connect bracket should be sandwiched between the seat frame and ARB bracket. It is important that the bolt and nut face in the direction shown (nut will be towards center of vehicle).



**Figure 9**

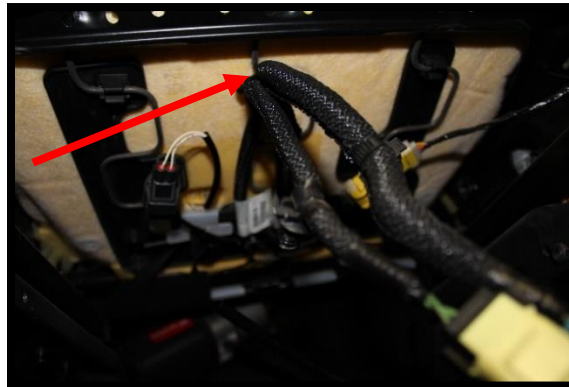


2-L) Once complete, the installation of the brackets should look like **Figure 10**.



**Figure 10**

2-M) If equipped, zip tie the cables for the yellow plug(s) to the bottom of the seat as shown in **Figure 11**. Do not completely tighten the zip tie (leave some slack for cables to move).



**Figure 11**

2-N) On the driver's side, use the quick connect bracket as guide to mark the three holes (for 2007-2012 Jeeps) or mark one the hole where it will mount to the leg of the seat (for 2013+ Jeeps) as shown in **Figure 12**. Drill the three 1/4" holes and mount the quick connect bracket to the inside of the seat frame with the supplied hardware.



**Figure 12**

### STEP 3 – Compressor Installation

- 3-A) Place the compressor on the bracket with the fan facing forward. Use the four bolts provided by ARB to mount the compressor to the bracket. Start all four bolts before tightening each one. See **Figure 13**.



**Figure 13**

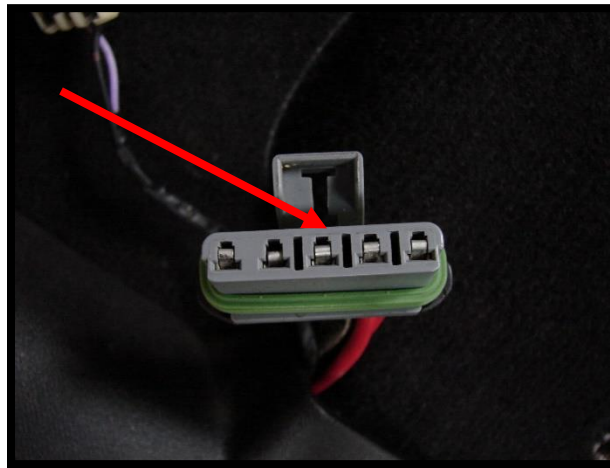
*TIP: You can leave the seat in this tilted position until you complete the wiring harness install. It will make running the harness easier. You can bolt the seat in place and connect everything once the wiring harness has been installed.*

*Also, now is a really good time to vacuum up all those chips from drilling on both sides of the Jeep.*



## STEP 4 – Wiring Harness Installation

- 4-A) Locate the 5-pin plug on the large ARB wiring harness (NOT the 5-pin plug on the compressor). Remove the plastic retainer from the back of the plug. This will allow the wires to be removed from the plug. Using a small flat blade screwdriver, or a paperclip, insert it into the smaller side of each metal connector and pull out the wire from the back of the plug at the same time (there is a metal tab that locks each connector in place and the screwdriver will temporarily unlock the connector so it can be removed). Make sure you note the order! Removing the wires from the plug allows the wires to be passed through the firewall later.

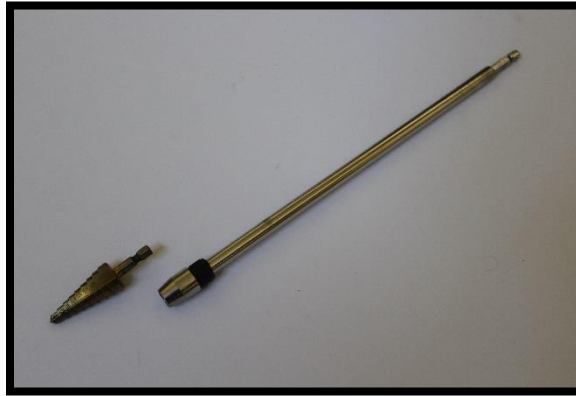


- 4-B) Remove the rocker panel on the passenger side. Pulling up on the panel near the push pins (2) will help release the pins (2) and then the panel. Up in the footwell, the panel must be pulled towards center of vehicle to release it. Then remove the side panel from the dash on the passenger side. A small flat head screwdriver will help get it started. It can then be pulled off.

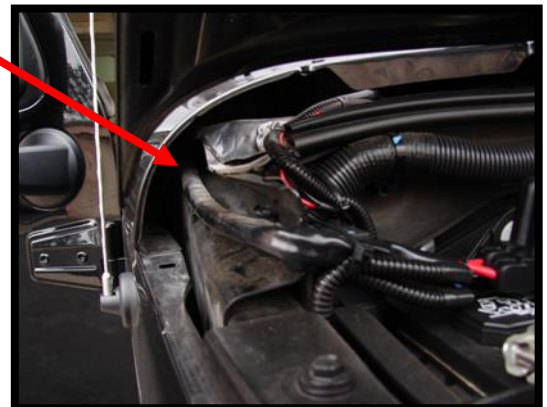
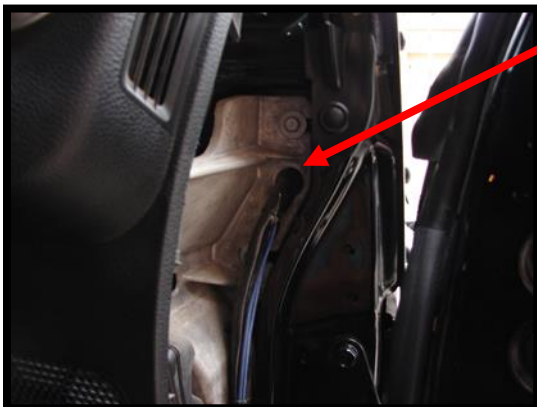


4-C) There are two ways to do this step.

Simplest - Using a 12" extension and  $\frac{3}{4}$ " step drill to open the hole in the firewall that runs into the engine compartment that is filled with expanding foam (see first picture at bottom of page). The  $\frac{3}{4}$ " drill will go through the foam quickly and then ease into the firewall portion since the hole is not round. Once the hole is opened up to  $\frac{3}{4}$ " you can pass the entire ARB harness through in one shot by attaching a metal rod and pulling through.



Harder (if tool not available) - This method will take patience. Use a metal rod to punch through the foam and sealing tape on back side of the hole through firewall. Pull the black sheathing back on the ARB wiring harness to expose about 3 feet of the harness near the end with the metal connectors you removed in Step 4-A. Starting with the three (3) **black** wires, use tape to attach the ends to the metal rod and pull them through the firewall. Repeat the process for the two (2) **red** wires. DO NOT try and do all five (5) at once. Now pull the sheathing up the harness so you have about 1 foot that is smooth (not bunched up). Secure the sheathing to the wires with tape (electrical tape is preferred) wrapping tightly. Use a set of pliers to squeeze the bundle into a flatter shape (a large round bundle will not fit through the flat shaped hole under the cowl). With a little finesse you can get the wire harness / sheathing through the firewall by working it back and forth. Once through, pull the sheathing up the harness again to cover the wires and then the whole harness should move easily through the firewall to adjust as needed.



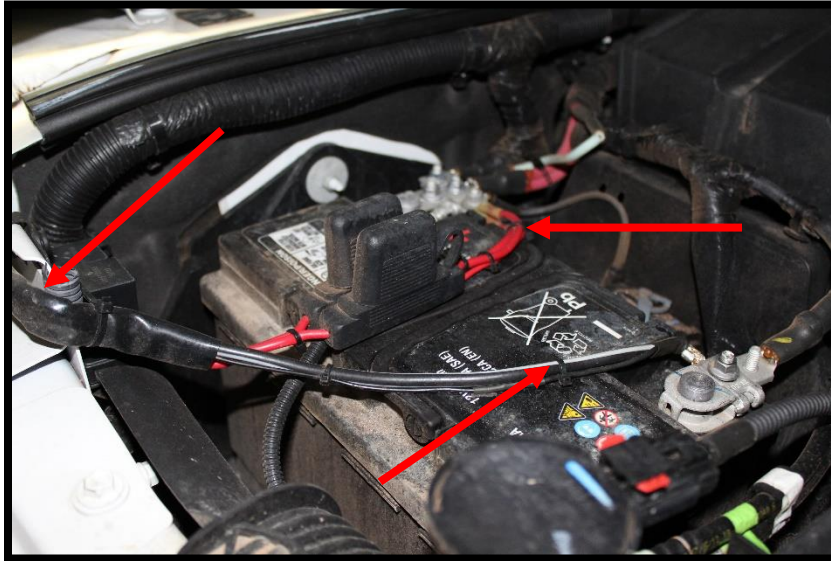
4-D) Run the ARB wiring harness down along the dash and along the rocker as shown below. Run the harness directly behind the door strap hook (i.e. between hook and body). Reinstall the metal connectors into the 5-pin plug in the correct order you noted in **Step 4-A**. If you forgot, you could always match up against the connector on the compressor. **This must be done before attaching harness to the battery in the next step!** Now run the long ARB wiring harness (the one with a plug on one end and 4 wires on the other end) in reverse along the large ARB harness. Leave a little extra length of the long ARB harness near the 5-pin plug. You will see 2 white connectors (for airlockers) which are not used. Just tuck these away.

**NOTE:** If you are running a sPOD or equivalent switch control, proceed directly to **Step 5** after completing the details above. Leave the remaining long ARB wiring harness in the footwell for now.

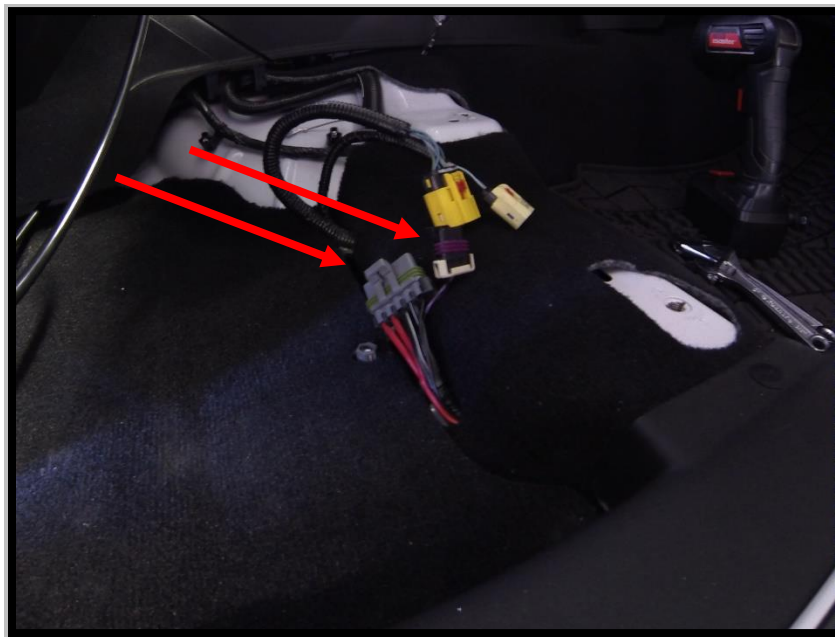
Run the remaining harness up behind the glove box (remove glove box for access) and leave there for now.



- 4-E) Go back to the engine compartment and attach the ARB harness to the battery. Both positive wires (**red**) should be placed in one of the provided connectors. Crimp and use a heat source to seal. Attach to positive (+) terminal of battery. Use the second connector to connect both negative wires (**black**) to the negative (-) terminal of battery. Make sure the wires are secure and run in a fashion not to interfere with anything.

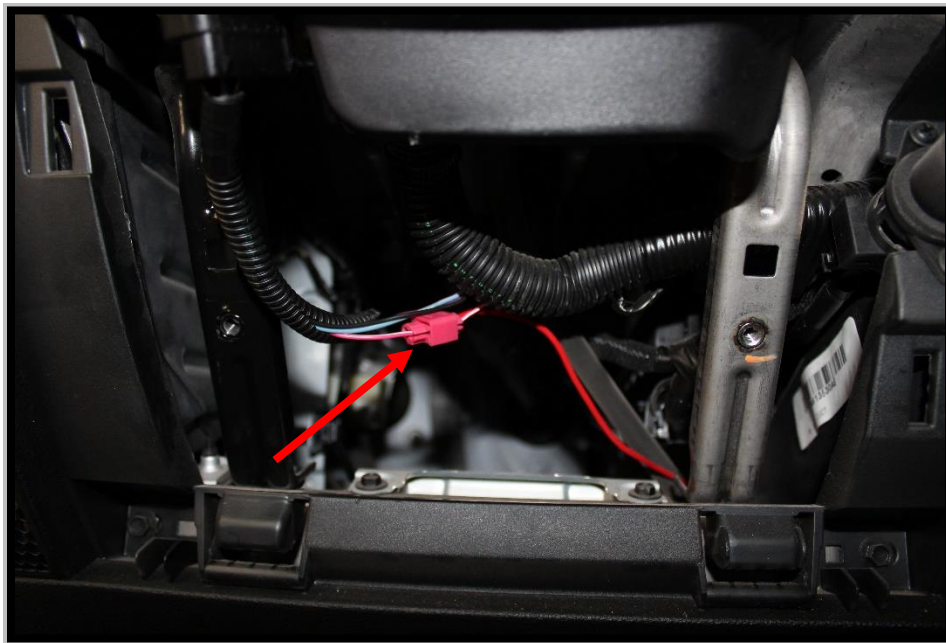


- 4-F) Reinstall the side panel and rocker panel. The two harnesses can be run under the carpet with the plugs positioned as shown below.





- 4-G) Now go back to the harness behind glove box. Follow the ARB instructions to connect the ARB switch harness (the one with all connectors) to the long ARB harness. ARB provides a 4-pin white connector to join the two sections. The other end of this harness will have a lot of terminal connectors (you will only be working with the connectors for the isolation switch (i.e. the on/off switch), a red wire w/ yellow stripe, and a blue wire w/ white stripe. The other two sets of terminal connectors are for front and rear air locker solenoids which are not applicable to this installation.
- 4-H) Run the end of the harness with all the connections described above to your switch location. Install the provide ARB switch and connect the terminals as indicated in the ARB wiring diagram.
- 4-I) Connect the red wire w/ yellow stripe to the pink wire w/ white stripe using the provided red Scotchlok as shown below. It is located under the steering wheel behind the dash panel. That panel is removed by grapping the top and pulling away. A metal plate will then need to be removed using a 10mm socket. This is an ignition on power source, so your compressor will only work if the ignition is on or the engine is running.



- 4-J) If you want your ARB switch to light up when your parking/headlights are on for visibility at night, connect the blue wire w/ white stripe to the orange wire w/gray stripe using the provided red T-Tap Set as shown below. The wire is in the harness that goes to the window control module.

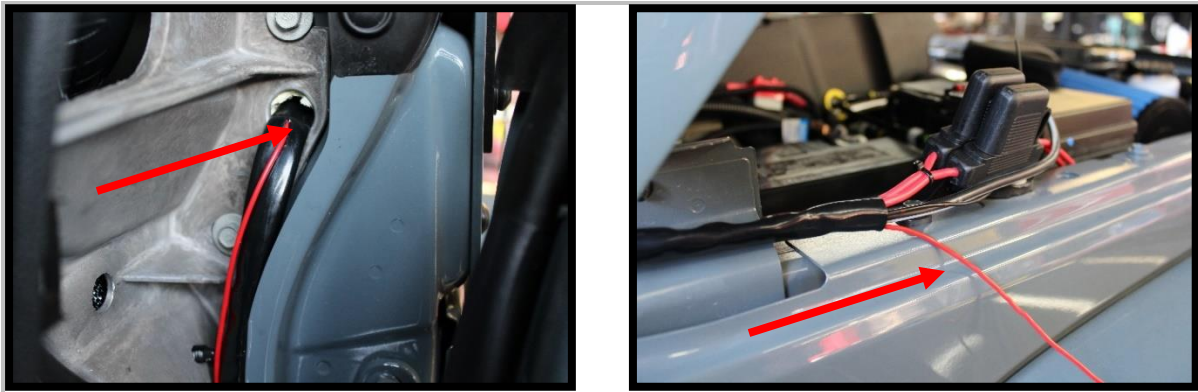




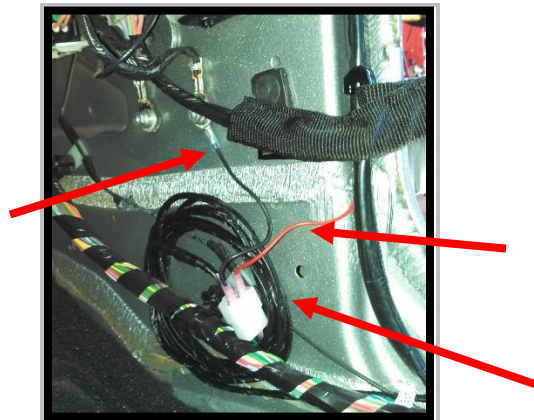
## STEP 5 – sPOD or Equivalent Switch Control Only (all others skip to Step 6)

**Note:** Two female spade connectors, one terminal spade connector, one ring terminal, ~20 feet of 22-18 gauge **red** wire, and 6" of 22-18 gauge **black** wire are suggested (not provided in kit). Note, the ARB switch harness is not used for this method.

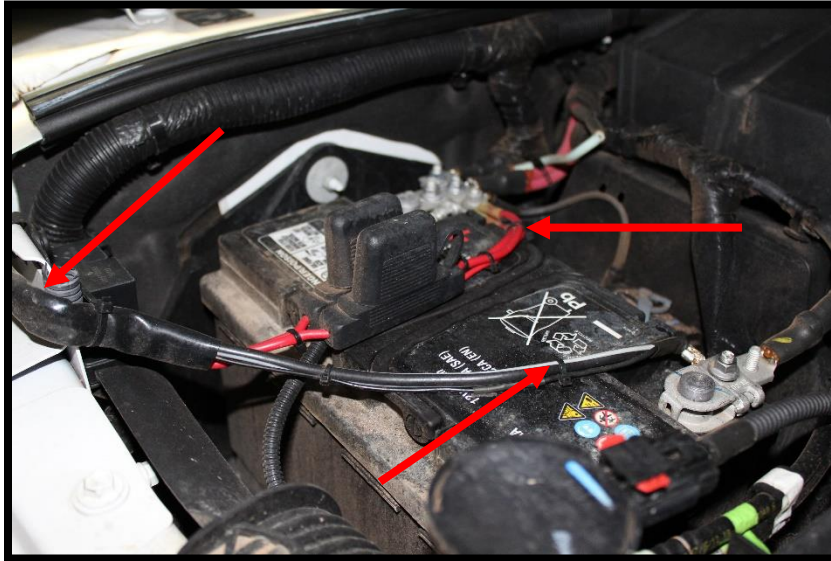
- 5-A) Install the white connector onto the long ARB harness. The connector is usually attached to the harness in a little plastic bag (refer to the ARB instruction manual). Once complete, use a female spade connector to connect a **red** wire to the male spade connector of the **purple** wire in the ARB white 4-pin connector. Now run the **red** wire to the switch connection of your choice on the sPOD under the hood. This is best accomplished by making a small slit in the main ARB harness sheathing that you just ran through the firewall and then fish the **red** wire through the sheathing until it comes out the other end in the engine compartment (see pictures below). You can then run the **red** wire to the switch connection of your choice on your switch control and connect using a terminal spade connector. You will not need to connect the corresponding ground to your switch control. Finally, use a female spade connector to connect a **black** wire to the male spade connector of the **black** wire in the ARB white 4-pin connector and run the other end to the ground stud in the footwell with a ring terminal.



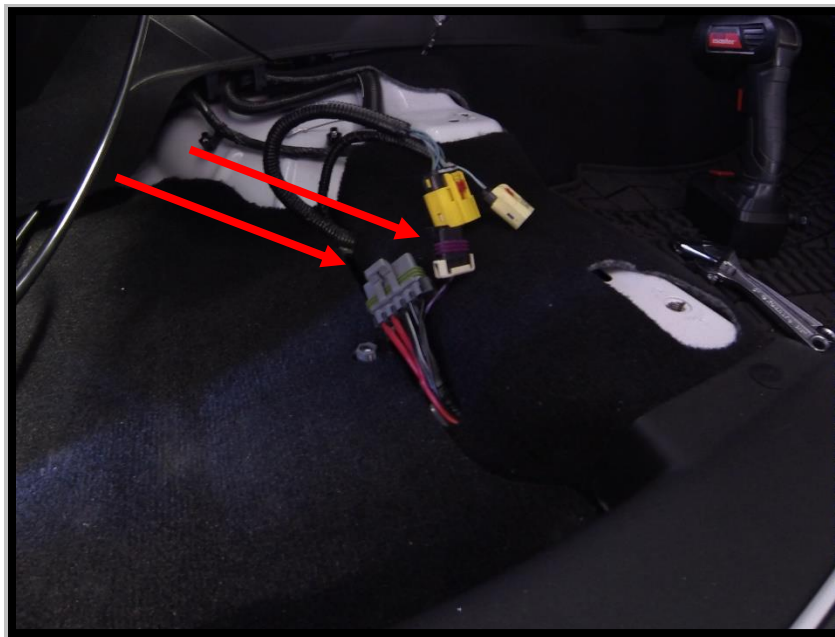
- 5-B) Coil up the remaining long ARB wiring harness you just connected the **red** and **black** wires to and position behind rocker panel in footwell.



5-C) Go back to the engine compartment and attach the ARB harness to the battery. Both positive wires (**red**) should be placed in one of the provided connectors. Crimp and use a heat source to seal. Attach to positive (+) terminal of battery. Use the second connector to connect both negative wires (**black**) to the negative (-) terminal of battery. Make sure the wires are secure and run in a fashion not to interfere with anything.

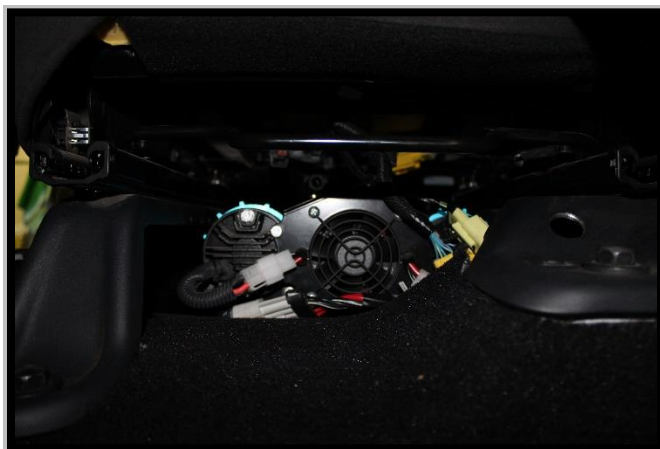


5-D) Reinstall the side panel and rocker panel. The two harnesses can be run under the carpet with the plugs positioned as shown below.



## STEP 6 – Seat Installation and Final Plumbing

- 6-A) Bolt the seat back in place and torque bolts to manufacturer specifications (45 ft-lbs). Connect the two plugs to the compressor. Reconnect the yellow plug(s), if applicable. While looking under seat, check for clearance on wires, cables, plugs, and compressor as the seat is moved forward and back. Use wires ties to secure cables from yellow plugs if necessary, leaving slack where necessary to allow the seat to move without getting caught on anything.



- 6-B) Remove the rear two screws from the center console as shown below. Now fish the 48-inch section of black tubing up and over the hump in the center of the Jeep underneath the console from the driver side to the passenger side. Use the pictures below as a guide as to where the tubing will end up going in and out. Placing something under the rear part of the console will help hold it up while fishing the tubing up and over.



Driver Side

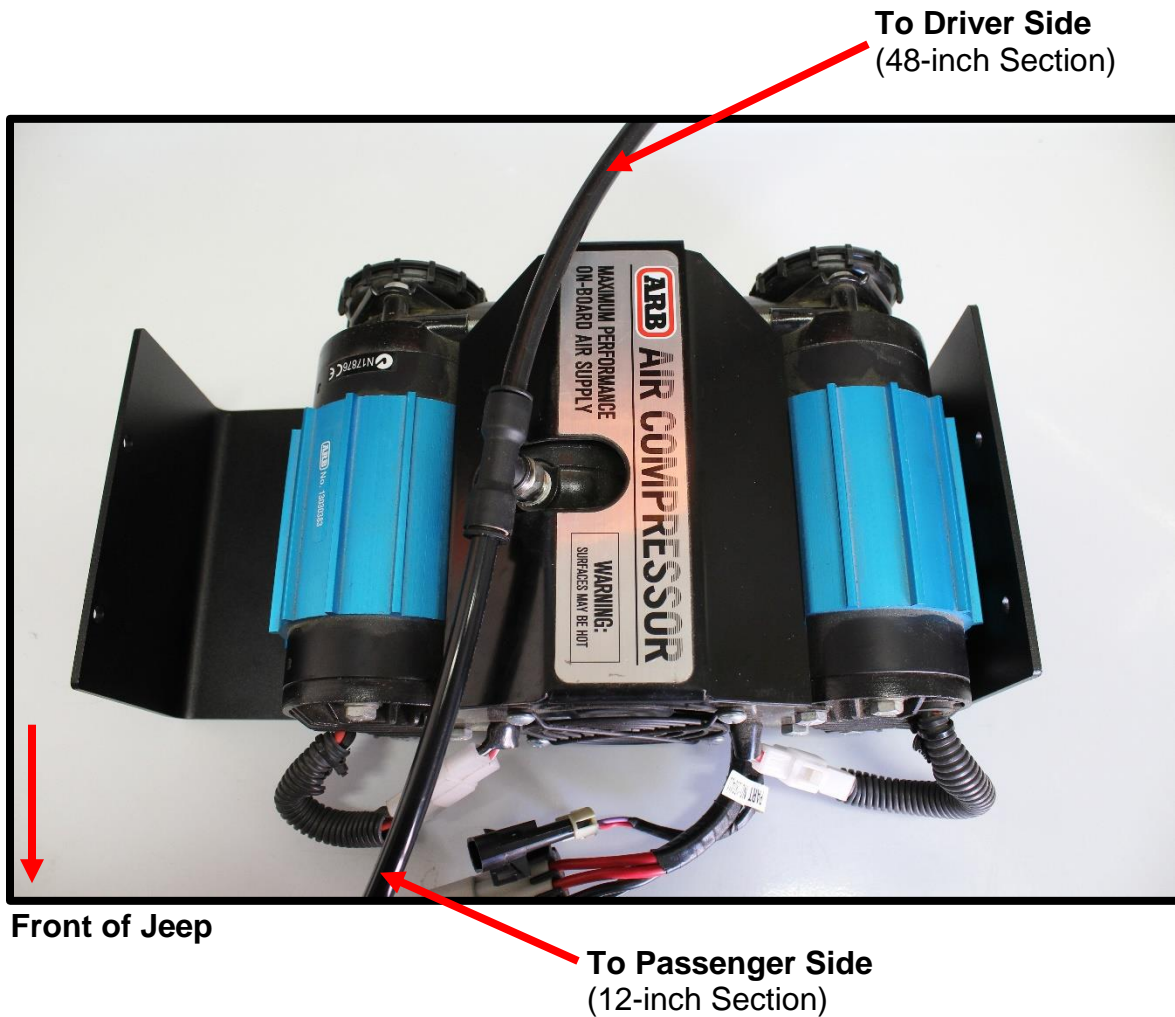


Passenger Side

- 6-C) Reinstall the two rear screws in the console when complete.



6-D) Connect the two sections of black nylon tubing to the quick connect bulkheads on each side of the vehicle and then to the quick connect t-fitting on top of the compressor. Press the tubing in firmly until it bottoms out at each connection. The figure below shows the recommended layout of the tubing to ensure it does not kink.



## STEP 7 – System Check

- 7-A) Plug each airline set-up into each side of Jeep (if you have the Air Down / Air Up Tool, remove it from the system for now). Turn on compressor. It should run for a few seconds then shut off (when it reaches the pressure safety switch built into the compressor). The system should be able to sit for a few minutes without the compressor cycling. If after a few seconds or even a minute the compressor cycles, you will need to check for leaks. The first thing to check is the fitting in the compressor to ensure it is tight. Once everything is ok, TURN OFF the compressor. Then push any one of the air chucks onto a valve stem to relieve pressure in the system, then the airlines can be removed from each side of Jeep. Proceed to set-up the Air Down / Air Up Tool (see [IJKP-18 Instructions](#)).

## STEP 8 – System Tips

- 8-A) The last part in your parts bag should be a black plastic plug. Keep this somewhere safe in your Jeep. It is used to close off one seat connection if you happen to only be using one side (i.e. to fix a flat or air up another vehicle). **DO NOT store it in one of the seat connections.** It will get broken off! See Quick User Guide for additional details.
- 8-B) The system is designed to be flexible in that you can air 1, 2, 3, or 4 tires at once since all the air chucks are self-sealing. Also, any of the four (4) airlines can also be used on their own. The same way you connect / disconnect the airlines from the seat connections, each airline can be removed from the splitter and plugged directly into either seat connection. This way you can use a single airline to fix a flat, air up a mattress, fill a bike tire, etc. (Check out [IJKP-32: Air Inflation Accessory Kit](#)). No need to carry a fifth single line since you have four to choose from.

Please contact [info@innovativeATproducts.com](mailto:info@innovativeATproducts.com) if you have any questions or feedback.

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